

REMARKS

Claims 10, 13-17, 22-26 and 29 are pending in the above-identified application. Claims 10, 13-17, 22-26 and 29 were rejected. With this Amendment, claim 10 was amended, claims 22-26 and 29 were cancelled, and claim 30 was added. Applicants maintain that no new matter has been added. Accordingly, claims 10, 14-17, and 30 are at issue in the above-identified application.

35 U.S.C. § 112 Indefiniteness Rejection of Claims

Claims 10, 14-17 and 29 were rejected under 35 U.S.C. § 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. Claims 10, 14-17 and 29 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse these rejections.

35 U.S.C. § 102 Anticipation Rejection of Claims

Claims 22, 25 and 26 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Yasugata* (JP 08-236095). Claims 10, 14-17, 22-26 and 29 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Gao et al.* (U.S. Patent No. 5,756,230). Claims 10, 14-17, 22-26 and 29 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Humphrey et al.* (EP 0730316).

Claim 10 recites a solid-electrolyte secondary battery comprising a positive electrode, a negative electrode, a solid electrolyte comprising a matrix polymer comprising a first fluorocarbon polymer having a weight-average molecular weight of greater than 550,000 and less than 1,000,000, wherein the matrix polymer further comprises a second fluorocarbon

polymer having a weight-average molecular weight of greater than 300,000 and less than 550,000, wherein the matrix polymer comprises 30 percent or more by weight of the fluorocarbon polymer having a weight-average molecular weight of greater than 550,000 and less than 1,000,000, wherein the positive electrode has a face which is directed towards the negative electrode and the solid-electrolyte layer is formed on the face of the positive electrode and impregnates into the face a solution in which the solid electrolyte is dissolved, wherein the negative electrode has a face directed toward the positive electrode and the solid-electrolyte layer is formed on the face and impregnates into the face a solution in which the solid electrolyte is dissolved; and wherein the first *and the second* fluorocarbon polymer are a polyvinylidene fluoride/hexafluoropropylene copolymer, wherein *the content of hexafluoropropylene is not less than 1 % and not more than 7 % by weight.*

Yasugata relates to a separator molded by adding polyvinylidene fluoride to polyethylene, and *not* formed by adopting a solid electrolyte like the present invention. Therefore, the present invention cannot be anticipated by Yasugata.

With respect to *Gao et al.*, though the invention of *Gao et al.* teaches polyvinyl fluoride and polyhexafluoropropylene as homopolymers, it does not teach using a polyvinylidene fluoride, as recited in claims 13 and 29. Further, while *Gao et al.* teaches a homopolymer having a weight-average molecular weight of 50,000 to 900,000 and a copolymer having a weight-average molecular weight of the 10,000 to 900,000, *Gao et al.* fails to teach a polymer having a weight-average molecular weight of greater than 300,000 and less than 550,000, as recited in claim 10 and 23. Therefore, the present invention is not anticipated by Gao's invention.

With respect to *Humphrey et al.*, *Humphrey* describes a polymer having two different peaks, as shown in Table 3. The only polymer described in *Humphrey* to have a weight-average

molecular weight of 550,000 or more is KYNAR 460. It is understood that KYNAR 460 is homopolymer of polyvinylidene fluoride from Table 4 of *Humphrey et al.* However, from only the description that the polymer has two peaks, it is not clear where the two peaks exist. Therefore, it cannot be said that Humphrey's invention has the same composition as the claims of the U.S. Patent Application of the present invention.

The present invention uses a solid electrolyte which has excellent adhesive properties with the electrode active substance. Further, claim 1 recites a first fluorocarbon polymer having a weight average molecular weight of greater than 550,000 and less than 1,000,000, which improves the adhesive properties of the solid electrolyte. Claim 1 further recites a second fluorocarbon polymer having a weight-average molecular weight of 300,000 to 550,000, which facilitates the forming of a coating film. Neither the first nor the second fluorocarbon polymers are suggested or described in *Humphrey*. Additionally, claim 10 recites wherein the first fluorocarbon polymer is a polyvinylidene fluoride/hexafluoropropylene copolymer, wherein the copolymer is 1 to 7 % by weight. None of the cited references teach or disclose a solid-electrolyte secondary battery, wherein the first *and the second* fluorocarbon polymer are a polyvinylidene fluoride/hexafluoropropylene copolymer, wherein *the content of hexafluoropropylene is not less than 1 % and not more than 7 % by weight.*

Accordingly, Applicants submit that the claimed invention is not anticipated by nor obvious over the applied references, either alone or in combination. Withdrawal of these grounds of rejection is respectfully requested.

In view of the foregoing, Applicant submits that the application is in condition for allowance. Notice to that effect is requested.

Respectfully submitted,

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